

### **AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently Amended) A ~~computer implemented method for assisting a user in viewing an object on a display device of a computer system, the method, the control and operation of a computer system, the computer system having a display device, the computer system providing information content for display, such information content potentially containing more content such as characters, pictures, lines, or pixels than can be conveniently displayed entirely on the display device at one time, comprising:~~

~~coupling a display device to a computer system;~~

~~mapping the information content generated by the computer system into a virtual desktop suitable for conveying the information content to the user;~~

~~displaying a certain portion of the object on the virtual desktop using the computer system's display device of the computer system;~~

~~tracking detecting, by an accelerometer internal to the computer system, translational movement movements of the display device; and~~

~~adjusting varying the displayed certain portion of the object that is displayed on the display device in a manner that corresponds to the translational movement of the display device detected by the accelerometer. virtual desktop in a manner related to the tracked movements of the display device by which the user is able to traverse the entire information content mapped to the virtual desktop and examine any certain portion or segment of the information content using the computer system's display device.~~

2. (Currently Amended) A ~~computer implemented~~ method as recited in claim 1 wherein a virtual magnification of the ~~displayed certain~~ portion that is displayed is updated in a manner correlated to the translational movement ~~tracked movements~~ of the display device.

3. (Currently Amended) A ~~computer implemented~~ method as recited in claim 1 wherein a virtual magnification of the ~~displayed certain~~ portion that is displayed is updated in response to a command entered into the computer system by a user of the computer system.

4. (Currently Amended) A ~~computer implemented~~ method as recited in claim 1 further comprising, ~~the act of~~ redefining the an orientation of the ~~certain~~ portion that is displayed via the display device such that, without moving the display device, the ~~certain~~ portion displayed via the display device changes.

5. (Currently Amended) A ~~computer implemented~~ method as recited in claim 4 wherein the orientation of the ~~certain~~ portion displayed is redefined in response to a request by a user.

6. (Currently Amended) A ~~computer implemented~~ method as recited in claim 1 wherein a first application executing upon the computer system is a physical map application providing a virtual map, the movement of the display device enabling visual navigation through the virtual map.

7. (Currently Amended) A ~~computer implemented~~ method as recited in claim 6 wherein the navigation capability of the physical map includes north, south, east, and west directional navigation through the virtual map.

8. (Currently Amended) A ~~computer implemented~~ method as recited in claim 7 wherein the navigation capability of the physical map further includes a scalability feature allowing adjustment of the scalability of the physical map in order to provide a viewer of the display device views of the physical map having different magnifications.

9. (Currently Amended) A ~~computer implemented~~ method as recited in claim 8 wherein the scalability feature is controlled according to the translational movement ~~tracked movements~~ of the display device.

10. (Currently Amended) A ~~computer implemented~~ method as recited in claim 8 wherein the scalability feature is controlled by user input separate from the translational movement ~~tracked movements~~ of the display device.

11. (Currently Amended) A ~~computer implemented~~ method as recited in claim 6 wherein the navigation capability of the physical map includes a scalability feature allowing adjustment of the scalability of the physical map in order to provide a viewer of the display device views of the physical map having different magnifications.

12. (Currently Amended) A ~~computer implemented~~ method as recited in claim 11 wherein the scalability feature is controlled according to the translational movement ~~tracked movements~~ of the display device.

13. (Currently Amended) A ~~computer implemented~~ method as recited in claim 11 wherein the scalability to feature is controlled by user input separate from the translational movement ~~tracked movements~~ of the display device.

14. (Currently Amended) A ~~computer implemented~~ method as recited in claim 1 wherein the display device and the computer system are formed in a single computer device provided to a user of the computer device.

15. (Currently Amended) A ~~computer implemented~~ method as recited in claim 14 wherein the computer device is a hand-held computer device.

16. (Currently Amended) A ~~computer implemented~~ method as recited in claim 15 wherein the hand-held computer device is a personal digital assistant (PDA).

17. (Currently Amended) A ~~computer implemented~~ method as recited in claim 16 wherein the PDA has handwriting recognition capability.

18. (Currently Amended) A ~~computer implemented~~ method as recited in claim 16 wherein the PDA has voice recognition capability.

19. (Currently Amended) A ~~computer implemented~~ method as recited in claim 1 wherein the visual information generated by the computer system includes multiple application windows.

20. (Currently Amended) A ~~computer implemented~~ method as recited in claim 19 wherein a first window of the multiple application windows corresponds to a first application executing upon the computer system.

21. (Currently Amended) A ~~computer implemented~~ method as recited in claim 20 wherein the first application executing upon the computer system is a physical map application.

22. (Currently Amended) A ~~computer implemented~~ method as recited in claim 21 wherein the physical map application enables navigation through a physical map via ~~user~~ movement of the display device.

23. (Currently Amended) A ~~computer implemented~~ method as recited in claim 1 wherein the ~~displayed certain~~ portion of the object that is displayed in the display device or segment of the ~~virtual desktop~~ is adjusted in a manner related to the translational movement ~~tracked movements~~ of the display device in relation to a ~~substantially planar~~ surface.

24. (Currently Amended) A ~~computer implemented~~ method as recited in claim 23 wherein a virtual magnification of the ~~displayed certain~~ portion of the object that is displayed in the display device is updated in response to a command entered into the computer system by a user of the computer system.

25. (Currently Amended) A ~~computer implemented~~ method as recited in claim 24 wherein the display device and the computer system are formed in a single device provided to a user of the computer device.

26. (Currently Amended) A ~~computer implemented~~ method as recited in claim 25 wherein the computer device is a hand-held computer device.

27. (Currently Amended) A ~~computer implemented~~ method as recited in claim 26 wherein the hand-held computer device is a personal digital assistant (PDA).

28. (Currently Amended) A ~~computer implemented~~ method as recited in claim 25, wherein the hand-held computer device is coupled to a second computer.

29. (Currently Amended) A ~~computer implemented~~ method as recited in claim 28, further comprising the act of utilizing the hand-held computer device to select information displayed on the second computer.

30. (Currently Amended) A ~~computer implemented~~ method as recited in claim 19 ~~22~~ further comprising the acts of:  
monitoring a real scene in real space and time;  
capturing ~~images~~ an image of the real scene; and  
displaying within a first window of the multiple application windows the image ~~captured images~~ of the real scene.

31. (Currently Amended) A ~~computer implemented~~ method as recited in claim 30 wherein a second window of the multiple application windows corresponds to an application program executing upon the computer system.

32. (Currently Amended) A method for visually navigating a virtual map generated by a physical map application executing upon a hand-held computer system, the hand-held computer system having a display device ~~and a motion sensor~~, the method, comprising:  
~~transforming visual information generated by the physical map application into a virtual map suitable for display via the display device;~~  
displaying a ~~certain~~ portion of the virtual map ~~via~~ on the display device;  
tracking, by an accelerometer internal to the hand-held computer system,  
movement ~~translational movements~~ of the hand-held computer system ~~using the motion sensor~~; and  
updating the ~~displayed~~ certain portion of the virtual map that is displayed on the display device in a manner correlated to the ~~tracked movements~~ movement of the hand-held computer system tracked by the accelerometer.

33. (Currently Amended) A ~~computer implemented~~ method as recited in claim 32 further comprising ~~the act of redefining the~~ an orientation of the ~~certain~~ portion of the virtual map that is displayed via on the display device such that, without moving the hand-held computer system, the ~~certain~~ portion of the virtual map that is displayed via the display device changes.

34. (Currently Amended) A ~~computer implemented~~ method as recited in claim 32 wherein the orientation of the ~~certain~~ portion displayed is redefined in response to a request by a user.

35. (Currently Amended) A ~~computer implemented~~ method as recited in claim 32 wherein a virtual magnification of the ~~displayed-certain~~ portion that is displayed is updated in a manner correlated to the ~~tracked movements~~ movement of the hand-held computer system.

36. (Currently Amended) A ~~computer implemented~~ method as recited in claim 32 wherein a virtual magnification of the ~~displayed-certain~~ portion that is displayed is updated in response to a command entered into the computer system by a user of the hand-held computer system.

37. (Currently Amended) A ~~computer implemented~~ method as recited in-claim 32 wherein the physical map application is a first application executing upon the hand-held computer system.

38. (Currently Amended) A ~~computer implemented~~ method as recited in claim 32 wherein the navigation capability of the physical map includes north, south, east, and west directional navigation through the virtual map.

39. (Currently Amended) A ~~computer implemented~~ method as recited in claim 38 wherein the navigation capability of the physical map further includes a scalability feature allowing adjustment of the scalability of the physical map in order to provide a viewer of the display device views of the physical map having different magnifications.

40. (Currently Amended) A ~~computer implemented~~ method as recited in claim 39 wherein the scalability feature is controlled according to tracked movements of the hand-held computer system.

41. (Currently Amended) A ~~computer implemented~~ method as recited in claim 39 wherein the scalability feature is controlled by user input separate from ~~tracked movements~~ the movement of the hand-held computer system.

42. (Currently Amended) A ~~computer implemented~~ method as recited in claim 32 wherein the navigation capability of the physical map includes a scalability feature allowing adjustment of the scalability of the physical map in order to provide a viewer of the display device views of the physical map having different magnifications.

43. (Currently Amended) A ~~computer implemented~~ method as recited in claim 42 wherein the scalability feature is controlled according to ~~tracked movements~~ the movement of the hand-held computer system.

44. (Currently Amended) A ~~computer implemented~~ method as recited in claim 42 wherein the scalability feature is controlled by user input separate from ~~tracked movements~~ the movement of the hand-held computer system.

45. (Currently Amended) A ~~computer implemented~~ method as recited in claim 32 wherein the hand-held computer system is a personal digital assistant (PDA).



46. (Currently Amended) A ~~computer implemented~~ method as recited in claim 45 wherein the PDA has voice recognition capability.

47. (Currently Amended) A ~~computer implemented~~ method as recited in claim 32 wherein the ~~displayed certain~~ portion of the virtual desktop is adjusted in a manner related to the ~~tracked movements~~ movement of the display device in relation to a ~~substantially planar~~ surface.

48. (Currently Amended) A ~~computer implemented~~ method as recited in claim 47 wherein a virtual magnification of the ~~displayed certain~~ portion is updated in response to a command entered into the computer system by a user of the hand-held computer system.

49. (Currently Amended) A ~~computer implemented~~ method as recited in claim 48 wherein the display device and the computer system are formed in a single device provided to a user of the computer device.

50. (Currently Amended) A ~~computer implemented~~ method as recited in claim 49 wherein the computer device is a hand-held computer device.

51. (Currently Amended) A ~~computer implemented~~ method as recited in claim 45 wherein the PDA has handwriting recognition capability.

52. (Currently Amended) A ~~computer implemented~~ method as recited in claim 50 wherein the hand-held computer device is a personal digital assistant (PDA).

53. (Currently Amended) A ~~computer implemented~~ method as recited in claim 49, wherein the hand-held computer device is coupled to a second computer.

54. (Currently Amended) A ~~computer implemented~~ method as recited in claim 53, further comprising ~~the act of~~ utilizing the hand-held computer device to select information displayed on the second computer.

55. (Currently Amended) A hand-held computer system comprising:

a ~~digital~~ processor;

~~a motion sensor coupled to a display device;~~

an accelerometer internal to the hand-held computer system;

~~the~~ a display device coupled to the ~~digital~~ processor; and

a computer readable medium coupled to the ~~digital~~ processor, the computer readable medium having computer executable instructions for:

~~mapping visual information generated by the hand-held computer system into a virtual desktop suitable for display via the display device;~~

displaying a ~~certain~~ portion of ~~the virtual desktop via~~ an object on the display device;

~~tracking~~ detecting, by the accelerometer internal to the computer system, translational movement ~~movements~~ of the hand-held computer system ~~via the motion sensor;~~ and

updating the ~~displayed~~ ~~certain~~ portion of the object that is displayed on the display device ~~virtual desktop~~ in a manner correlated to the translational movement ~~tracked movements~~ of the hand-held computer system detected by the accelerometer.

56. (Currently Amended) A hand held computer system as recited in claim 55 wherein the computer readable medium further comprises computer executable instructions for redefining ~~the~~ an orientation of the ~~certain~~ portion displayed via the display device such that, without moving the display device, the ~~displayed certain~~ portion of the object that is displayed via the display device changes.

57. (Currently Amended) A hand held computer system as recited in claim 56 wherein the orientation of the ~~displayed certain~~ portion of the object that is displayed is redefined in response to a request by a user.

58. (Currently Amended) A hand held computer system as recited in claim 55 wherein the computer readable medium further comprises computer executable instructions for updating a virtual magnification of the ~~displayed certain~~ portion of the object that is displayed in a manner correlated to the translational movement ~~tracked movements~~ of the display device.

59. (Currently Amended) A hand held computer system as recited in claim 55 wherein the computer readable medium further comprises computer executable instructions for updating a virtual magnification of the ~~displayed certain~~ portion of the object that is displayed in response to a command entered into the computer system by a user of the hand-held computer system.

60. (Original) A hand held computer system as recited in claim 55 wherein the computer readable medium further comprises computer executable instructions for a physical map application providing a virtual map, ~~the~~ movement of the display device enabling visual navigation through the virtual map.

61. (Original) A hand held computer system as recited in claim 60 wherein the navigation capability of the physical map includes north, south, east, and west directional navigation through the virtual map.

62. (Original) A hand held computer system as recited in claim 61 wherein the navigation capability of the physical map further includes a scalability feature allowing adjustment of the scalability of the physical map in order to provide a viewer of the display device views of the physical map having different magnifications.

63. (Currently Amended) A hand held computer system as recited in claim 62 wherein the scalability feature is controlled according to the translational movement ~~tracked movements~~ of the display device.

64. (Currently Amended) A hand held computer system as recited in claim 62 wherein the scalability feature is controlled by user input ~~separate from tracked movements of the display device~~.

65. (Previously Presented) A hand held computer system as recited in claim 60 wherein the navigation capability of the physical map includes a scalability feature allowing adjustment of the scalability of the physical map in order to provide a viewer of the display device views of the physical map having different magnifications.

66. (Currently Amended) A hand held computer system as recited in claim 65 wherein the scalability feature is controlled according to the translational movement ~~tracked movements~~ of the display device.

67. (Currently Amended) A hand held computer system as recited in claim 65 wherein the scalability feature is controlled by user input separate from the translational movement ~~tracked movements~~ of the display device.

68. (Original) A hand held computer system as recited in claim 55 wherein the hand-held computer system is a personal digital assistant (PDA).

69. (Original) A hand held computer system as recited in claim 68 wherein the PDA has handwriting recognition capability.

70. (Original) A hand held computer system as recited in claim 68 wherein the PDA has voice recognition capability.

71. (Previously Presented) A hand held computer system as recited in claim 55 wherein the visual information generated by the hand-held computer system includes multiple application windows.

72. (Previously Presented) A hand held computer system as recited in claim 71 wherein a first window of the multiple application windows corresponds to a first application executing upon the hand-held computer system.

73. (Original) A hand held computer system as recited in claim 72 wherein the first application executing upon the computer system is a physical map application.

74. (Currently Amended) A hand held computer system as recited in claim 73 wherein the physical map application enables navigation through a physical map via ~~user~~ movement of the display device.

75. (Currently Amended) A hand held computer system as recited in claim 55 wherein the ~~displayed certain~~ portion of the virtual desktop that is displayed on the display device is adjusted in a manner related to the translational movement ~~tracked movements~~ of the display device in relation to a ~~substantially planar~~ surface.

76. (Currently Amended) A hand held computer system as recited in claim 75 wherein the computer readable medium further comprises computer executable instructions for updating a virtual magnification of the ~~displayed certain~~ portion is updated in response to a command entered into the computer system by a user of the hand-held computer system.

77. (Previously Presented) A hand held computer system as recited in claim 76 wherein the display device and the hand-held computer system are formed in a single device provided to a user of the computer device.

78. (Original) A hand held computer system as recited in claim 77 wherein the computer device is a hand held computer device.

79. (Original) A hand held computer system as recited in claim 78 wherein the hand held computer device is a personal digital assistant (PDA).

80. (Previously Presented) A hand held computer system as recited in claim 78, wherein the hand held computer device is coupled to a second computer.

81. (Original) A hand held computer system as recited in claim 80, wherein the hand held computer device is utilized to select information displayed on the second computer.

82. (Currently Amended) A hand held computer system as recited in claim 74 wherein the computer readable medium further comprises computer executable instructions for:  
monitoring a real scene in real space and time;  
capturing ~~images~~ an image of the real scene; and  
displaying within a first window of the multiple application windows the image ~~captured images~~ of the real scene.

83. – 98. (Cancelled)

99. (Currently Amended) A hand-held computer system comprising:  
a ~~digital~~ processor;  
~~a motion sensor coupled to the digital processor, the motion sensor~~ an accelerometer internal to the hand-held computer system, the accelerometer capable of sensing movement ~~motion~~ relative to a ~~substantially planar~~ surface;  
a display device coupled to the ~~digital~~ processor; and  
a computer readable medium coupled to the ~~digital~~ processor, the computer readable medium having computer executable instructions for:  
~~mapping visual information generated by the hand-held computer system into a virtual desktop suitable for display via the display device;~~  
displaying a ~~certain~~ portion of the ~~virtual desktop~~ via an object on the display device;  
~~tracking detecting, by the accelerometer internal to the computer system,~~ movement ~~translational movements~~ of the hand-held computer system relative to the surface ~~via the motion sensor~~; and  
updating the ~~displayed~~ certain portion of the object that is displayed on the display device ~~virtual desktop~~ in a manner correlated to the movement ~~tracked movements~~ of the hand-held computer system in relation to a

~~substantially planar~~ the surface detected by the accelerometer.

100. (New) The hand-held computer system of claim 99, further comprising:  
a gyroscope to determine rotational movement of the display device; and  
wherein, the computer readable medium further including computer executable instructions for varying the certain portion of the object that is displayed on the display device in a manner based on the rotational movement of the display device detected by the gyroscope.
101. (New) The hand-held computer system of claim 55, further comprising:  
a gyroscope to determine rotational movement of the display device; and  
wherein, the computer readable medium further including computer executable instructions for varying the certain portion of the object that is displayed on the display device in a manner based on the rotational movement of the display device detected by the gyroscope.
102. (New) A method for assisting a user in viewing an object on a display device of a hand-held computer system, the method, comprising:  
displaying a portion of the object on the display device of the computer system;  
detecting, by an accelerometer, movement of the display device; and  
varying the portion of the object that is displayed on the display device in a manner that corresponds to the movement of the display device detected by the accelerometer.
103. (New) The method of claim 102, wherein, the accelerometer is internal to the hand-held computer system.



104. (New) The method of claim 102, further comprising,  
detecting, by a gyroscope, rotational movement of the display device; and  
varying the portion of the object that is displayed on the display device in a  
manner based on the rotational movement of the display device detected by the  
gyroscope.